BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Promote Aviation Safety	)	WT Docket No. 19-140
	)	
WiMAX Forum Petition to Adopt Service Rules for the Aeronautical Mobile Airport Communications System (AeroMACS)	)	RM-11793
	)	
Petition of Sierra Nevada Corporation for Amendment of the Commission's Rules to Allow for Enhanced Flight Vision System Radar under Part 87	)	RM-11799
	)	
Petition of Aviation Spectrum Resources, Inc. for Amendment of Sections 87.173(b) and 87.263(a) of the FCC's Rules to Allow Use of the Lower 136 MHz Band by Aeronautical Enroute Station	)	RM-11818
	)	
Petition of Airports Council International-North America Regarding Aeronautical Utility Mobile Stations	)	RM-11832

To: The Commission

REPLY COMMENTS OF LOCKHEED MARTIN CORPORATION

Lockheed Martin Corporation ("Lockheed Martin") herein offers comments in response to the Commission's omnibus aviation Notice of Proposed Rulemaking.[1]

[1] *Amendment of the Commission's Rules to Promote Aviation Safety*, Notice of Proposed Rulemaking, WT Docket No. 19-140, RM-11793, RM-11799, RM-11818, RM-11832, FCC 19-53 (rel. Jun. 7, 2019) ("NPRM").

Lockheed Martin takes this opportunity to address one element of the proceeding, namely the item related to expanding available spectrum resources to support aeronautical mobile telemetry ("AMT") operations in the C-band.

As a major aerospace manufacturer, Lockheed Martin requires unfettered access to spectrum for routine AMT operations. This spectrum supports the development and testing phases for multiple product lines for fixed-wing aircraft, rotorcraft, unmanned platform, and guided missiles that Lockheed Martin assembles for commercial, civil, and military customers. Flight testing is a crucial element of the product cycle to ensure the ultimate delivery of certified products for which the function of all of the aircraft primary and secondary systems have been validated.

Lockheed Martin is encouraged that the Commission has issued the long-awaited NPRM addressing the matter of making access available to the 5091-5150 MHz band for AMT operations. As an authorized user at its major manufacturing locations of the S- and L-band frequencies currently allocated for AMT, Lockheed Martin is directly affected by the availability of AMT spectrum resources and urges the Commission to establish, in a timely manner, a regulatory framework that both governs AMT access at particular locations in the subject C-band frequencies and protects AeroMACS operations, which are expected to be conducted on a co-primary basis.

In addition to addressing an increase in the number and complexity of flight test missions for which the transmission of AMT data is crucial, Lockheed Martin is increasingly required to meet contractual provisions in customer agreements that dictate the use of C-band aircraft equipage for telemetry operations. Accordingly, the

dependable availability of spectrum for conducting such operations is an imperative for Lockheed Martin; furthermore, ensuring the timely flight testing of U.S.-manufactured aircraft is in the national interest. In light of these requirements, Lockheed Martin offers the following comments specific to the Commission's NPRM.

First, Lockheed Martin recognizes that AeroMACS has priority over AMT systems, but urges the Commission to establish a sufficiently flexible licensing and operational framework that does not unfairly prejudice AMT operations at the manufacturing locations where the subject frequencies would be required for use. Priority should not be construed as a regulatory status to mean exclusivity of operations. Lockheed Martin asserts instead that the Commission should develop an enabling regulatory framework to support operations of both AMT and AeroMACS operations by encouraging sharing arrangements at locations where such operations are to be collocated and by limiting appropriately the protection zone around AeroMACS-enabled airports to maximize the airspace in which AMT operations can be conducted.

Second, Lockheed Martin believes that any spectrum sharing arrangement will of necessity be predicated upon prior testing that must be conducted with the objective of establishing known thresholds for both adjacent channel and, to the extent it is technically feasible, co-channel sharing scenarios. Lockheed Martin is itself poised to undertake testing of this nature to contribute to the overall understanding of what future operational frameworks might be practicable, but also recognizes that only a complete operational environment – inclusive of AeroMACS equipment – will generate the most valuable results.

Serious questions are posed in the NPRM and remain outstanding related to the compatibility of these two different systems. Lockheed Martin thus urges the Commission to encourage compatibility testing by the stakeholders as a prior condition to authorizing AeroMACS operations and recommends that the FCC delay authorizing AeroMACS operations at the handful of domestic airports collocated with AMT facilities, until testing is authorized and undertaken. Indeed, the Commission presents this option by posing a question of whether "if the parties do not timely agree to sharing criteria, to defer AeroMACS implementation at the six specified airports and any other locations that present similar sharing issues."[2]

[2] NPRM at 42.

* * *

Lockheed Martin looks forward to continuing to work with the FCC and the relevant spectrum stakeholders to achieve a regulatory solution that permits equitable access to the C-band.

Respectfully submitted,

LOCKHEED MARTIN CORPORATION

/s/ Jennifer A. Warren
Jennifer A. Warren
Vice President, Technology Policy & Regulation

Ryan N. Terry
Director, Regulatory Licensing & Policy

Lockheed Martin Government Affairs
2121 Crystal Drive, Suite 100
Arlington, VA 22202

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